

Unboxing Blind Boxes' Impulse Buying: The Impact of Perceived Uncertainty, Curiosity, and Perceived Luck

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Abstract

Purchases of blind box products among Generation Z indicate a tendency toward impulsive buying driven by uncertainty regarding product contents. This study aims to examine the effect of perceived uncertainty on impulse buying and to test the roles of curiosity as a mediating variable and perceived luck as a moderating variable. This research adopts a quantitative design. Data were collected through an online questionnaire distributed to Generation Z blind box consumers aged 18–28 years in Indonesia and analysed using PLS-SEM. The results show that perceived uncertainty has a positive and significant effect on both impulse buying and curiosity. However, curiosity does not have a significant effect on impulse buying and therefore does not mediate the relationship between perceived uncertainty and impulse buying. In addition, perceived luck does not significantly moderate the relationship between perceived uncertainty and impulse buying. The findings indicate that product uncertainty can directly trigger impulsive buying behaviour without the involvement of curiosity or perceived luck.

Keywords: blind box, curiosity, Generation Z, impulse buying, perceived luck, perceived uncertainty.

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Introduction

The development of digital technology and the increasing use of social media have brought significant changes in consumer behaviour. Consumers no longer purchase products solely on their functional value; they also consider emotional experiences, entertainment, and symbolic values associated with self-identity and social status (Cruz et al., 2025; Fan & Wang, 2023). This shift indicates that modern consumption is increasingly oriented toward experiential consumption, in which products are selected for their ability to provide sensations, enjoyment, and social interactions that can be shared through digital platforms. In this context, the retail industry is required to offer products that not only fulfil consumers' practical needs but also create engaging emotional experiences throughout the purchasing process (Zhang et al., 2022).

This shift in consumption patterns is reflected in the increasing popularity of collectable products, particularly among younger generations. Generation Z is recognised as a group that has grown up in a digital environment and possesses a strong attachment to social media, making them more likely to seek unique consumption experiences that can be shared online (Francis & Hoefel, 2018). Various collectable products, such as action figures, trading cards, and character toys, have gained popularity because they serve not only as consumer goods but also as collectables that can be displayed and become part of consumers' identities. This phenomenon indicates that consumption activities are increasingly associated with self-expression and participation in popular culture trends.

Among various collectable products, blind boxes have emerged as one of the fastest-growing trends in recent years. A blind box is a collectable toy packaged in a sealed box, so consumers do not know its contents until the packaging is opened (Liu, 2022). This concept creates a sense of surprise and anticipation, making the purchasing experience different from that of conventional products. In addition, the popularity of blind boxes has been driven by the widespread circulation of unboxing content on social media, where creators showcase the process of opening the packaging and revealing the contents. Such content not only provides entertainment for viewers but also encourages curiosity and increases consumers' interest in purchasing these products (Huang & Mohamad, 2025). Thus, social media plays an important role in strengthening the emotional appeal of products and accelerating the diffusion of experience-based consumption trends.

The blind box phenomenon also indicates a tendency toward more spontaneous purchasing behaviour. Consumers often make unplanned purchases to experience the sense of surprise associated with the product. This behaviour is known as impulse buying, namely, purchases made suddenly and driven by strong emotional impulses (Rook, 1987). In the context of surprise-based products such as blind boxes, product characteristics that feature mystery and collectability can enhance emotional appeal, thereby encouraging consumers to engage in impulse buying (Wu et al., 2021). Therefore, impulse buying is an important consumer behaviour to analyse in understanding the consumption behaviour of blind box products.

One factor closely related to this phenomenon is perceived uncertainty, which refers to consumers' perceptions of the outcomes of a purchase. In blind box products, consumers are unaware of the character or type of item contained in the package until it is opened. This uncertainty creates a sense of anticipation and enhances the emotional experience during the purchasing process (Cruz et al., 2025). This condition can trigger consumers' curiosity and encourage repeat purchases until the desired item is obtained (Wu et al., 2021). Thus, perceived uncertainty can serve as an important stimulus influencing consumer purchasing behaviour.

Nevertheless, previous studies examining the effect of perceived uncertainty on impulse buying have shown inconsistent findings. Zhang et al. (2022) found that perceived uncertainty positively affects impulse buying for blind box products. In contrast, Xia et al. (2024) and Cakanlar and Nguyen (2019) demonstrated that uncertainty may reduce the tendency toward impulse buying in certain contexts. Furthermore, Chen et al. (2025) found that curiosity does not always have a significant effect on impulse buying, as it may encourage consumers to explore information before making purchasing decisions. These inconsistent findings indicate a research gap regarding the psychological mechanisms explaining how uncertainty may influence impulse buying behaviour.

From a consumer psychology perspective, curiosity arises when individuals seek to close the information gap between what they know and what they want to know (Golman & Loewenstein, 2014). When consumers are confronted with situations characterised by uncertainty, curiosity may motivate individuals to seek information or engage in further exploration (Gruber et al., 2014). Therefore, curiosity may serve as a psychological mechanism that mediates the relationship between perceived uncertainty and impulse buying.

Furthermore, the random nature of blind box products is also associated with the phenomenon of gambler's fallacy, which refers to the tendency of individuals to believe that previous outcomes may influence subsequent outcomes. Such beliefs may shape perceived luck, defined as individuals' perceptions of their chances of obtaining certain outcomes. Consumers with a high level of perceived luck tend to interpret uncertainty as an opportunity to obtain rare items, thereby increasing optimism and emotional motivation to make purchases (Si, 2025). Therefore, perceived luck can strengthen the relationship between uncertainty and the tendency to impulse-buy for surprise-based products.

This study employs the Stimulus–Organism–Response (S–O–R) theoretical framework proposed by Mehrabian and Russel (1974) to explain the psychological mechanisms underlying the purchasing process. Within this framework, perceived uncertainty is positioned as a stimulus that triggers consumers' internal psychological reactions. These reactions are reflected in curiosity and perceived luck as organism states, which subsequently influence consumers' behavioural responses, such as impulse buying.

This study examines the effect of perceived uncertainty on impulse buying, with curiosity as a mediating variable and perceived luck as a moderating variable, in the context of blind box product purchases. This study is expected to contribute to the development of the consumer behaviour literature, particularly by understanding the psychological mechanisms that explain how product uncertainty can trigger impulse buying behaviour in the digital era.

Literature Review

S-O-R Theory

The Stimulus–Organism–Response (S-O-R) theory, developed by Mehrabian and Russell (1974), explains that individual behaviour is influenced by the relationships among external stimuli, internal psychological states, and the resulting behavioural responses. These stimuli are then processed within the organism, which refers to internal psychological conditions encompassing cognitive and affective processes such as perception, emotion, and motivation (Jacoby, 2002). This internal process subsequently produces observable consumer actions, such as purchase decisions or impulse buying (Mehrabian & Russell, 1974). In this study, perceived uncertainty is conceptualised as a stimulus arising from the characteristics of blind box products that engender uncertainty, while curiosity and perceived luck are organism states that emerge as consumers' psychological reactions to this uncertainty. These internal reactions then drive the response in the form of impulse buying, i.e., spontaneous purchases made without prior planning as a reaction to the emotional stimulation experienced by consumers.

Consumer Behaviour Model

According to Engel *et al.* (1995), consumer behaviour is a decision-making process consisting of several interrelated stages: need recognition, information search, pre-purchase alternative evaluation, purchase, consumption, post-purchase evaluation, and divestment. This process begins with consumers recognising a need, followed by searching for and evaluating information before making a purchase, and by assessing the consumption experience after product use. In the context of uncertainty-based products such as blind boxes, this process is also influenced by stimuli originating from product characteristics and the marketing environment, including unboxing content on social media. These stimuli are first processed through information processing stages, namely exposure, attention, comprehension, acceptance, and retention, before triggering need recognition in consumers. Uncertainty about product contents can spark curiosity, encouraging consumers to seek additional information and consider possible purchase outcomes. At the alternative evaluation stage, individuals' belief in luck may influence their perception of the likelihood of obtaining certain or rare items, thereby increasing consumers' tendency to make purchases. This condition can trigger impulse buying behaviour, namely, spontaneous purchases made without careful planning in response to attractive stimuli and perceived consumer uncertainty about outcomes. In addition, consumer behaviour is influenced by various factors, namely cultural, social, personal, and psychological factors (Kotler & Keller, 2016).

Perception

According to Sumarwan (2017), perception is the process by which consumers receive and process information from their environment. The stages of exposure, attention, and interpretation are referred to as the perceptual process. This perception, together with the level of consumer involvement and memory, influences how consumers process the information they receive. Furthermore, how consumers process information and form perceptions affects their decision-making when purchasing and using goods and services.

Perceived Uncertainty

Perceived uncertainty refers to a state in which an individual experiences a lack of knowledge about what will happen in the future, particularly when faced with various possible outcomes (Quintal et al. 2010). In some situations, a high level of uncertainty can stimulate the brain's reward system, which in turn enhances behavioural motivation and an individual's learning capacity (Jezzini et al. 2021). Perceived uncertainty is also defined as a condition in which individuals feel they lack sufficient information to predict the outcome of a situation or the decision to be made (Becker & Knudsen, 2005).

Curiosity

Curiosity refers to an internal psychological drive that motivates individuals to explore new things and seek previously unknown information (Berlyne, 1978). According to Loewenstein (1994), curiosity arises when an individual experiences an information gap, namely the discrepancy between what is known and what is desired to be known. When this gap emerges, individuals attempt to close it through information seeking or exploratory behaviour. In the context of consumer behaviour, curiosity is one of the key triggers of impulse buying, particularly when consumers face uncertain situations, such as purchasing surprise products (e.g., blind boxes). Van Lieshout et al. (2021) found that the level of curiosity increases along with greater uncertainty regarding the outcomes obtained, regardless of whether the outcomes are favourable or not.

Perceived Luck

Perceived luck refers to the extent to which individuals believe that luck is an important factor in determining the outcome of an event, particularly those that are beyond personal control (Wohl & Enzle, 2003). In the context of consumer behaviour, perceived luck refers to an individual's belief in their chances of "being lucky" in a given situation, such as obtaining rare gifts or limited-edition products. This belief influences how individuals perceive risk and make decisions when purchasing products with uncertain outcomes (Day & Maltby, 2003). Individuals who are unable to explain an outcome in terms of their personal ability or effort tend to attribute it to external factors, such as "luck". Therefore, perceived luck reflects an optimistic mindset and a positive cognitive bias that leads individuals to believe they have a greater chance than others (Yarritu et al. 2014).

Impulse Buying

Impulse buying refers to a purchasing behaviour that is spontaneous, rapid, and unplanned. According to Rook (1987), impulse buying is a purchasing decision that occurs suddenly, driven by a strong urge and intense emotions to immediately acquire a product. Wu et al. (2021) explain that impulse buying arises from the interaction between external stimuli (such as promotions, product design, or scarcity) and internal consumer factors (such as positive emotions, curiosity, or sudden desire). According to Verplanken and Herabadi (2001), impulse buying behaviour is also influenced by two main dimensions: the cognitive dimension (buying without prior planning or reflection) and the affective dimension (positive emotions, excitement, or strong urges to purchase).

Relationships among Variables

Perceived uncertainty refers to a situation in which individuals feel uncertain or lack sufficient understanding because the information is considered unclear or unreliable (Becker & Knudsen, 2005). Holbork (1986) argued that shopping values are closely associated with impulse buying behaviour. In this context, consumption experiences involving elements of uncertainty can generate curiosity and pleasurable surprise, thereby encouraging subsequent purchase decisions (Laran & Tsirios, 2013). Therefore, products with uncertainty elements, such as blind boxes, can sustain consumers' excitement and enjoyment while also triggering impulse buying behaviour.

H1: Perceived uncertainty has a significant positive effect on impulse buying of blind box products.

Uncertainty often stimulates curiosity in individuals. Curiosity is defined as an individual's psychological drive to explore novel and unknown information (Berlyne, 1978). According to

Loewenstein (1994) and information-gap theory, curiosity arises when individuals recognise a gap between what they know and what they want to know. Research findings by Van Lieshout et al. (2021) also show that the intensity of curiosity increases as outcome uncertainty rises, regardless of whether the outcomes are favourable or unfavourable. In the context of blind box products, the lack of knowledge about product contents creates a natural drive for consumers to seek further information in order to close this information gap. Thus, the greater the level of perceived uncertainty, the stronger the curiosity that emerges.

H2: Perceived uncertainty has a significant positive effect on curiosity of blind box products.

In marketing, emotional factors have been shown to significantly influence consumers' purchase intentions and behaviours. Emotions serve as an important source of information that shapes how individuals process information, make judgments, and engage in behavioural responses, sometimes independently of their cognitive evaluations (Bagozzi et al., 1999). One of the most fundamental emotions is curiosity, the psychological drive to seek new information or understand what is not yet known. This drive fosters interest and reduces consumers' feelings of uncertainty, often leading to spontaneous and not fully rational actions (Gruber & Ranganath, 2019). A study by Hill et al. (2016) also shows that the higher an individual's level of curiosity, the greater their motivation to purchase. Therefore, curiosity not only serves as a bridge between external stimuli and consumer behaviour but also acts as a key emotional factor that can trigger impulse buying behaviour.

H3: Curiosity has a significant positive effect on impulse buying of blind box products.

The relationship between perceived uncertainty and impulse buying can be explained through the mediating role of curiosity. When individuals are exposed to situations characterised by high uncertainty, such as not knowing the final outcome of a purchase (blind box products), they tend to experience a psychological drive to seek or explore unknown information (Zhang et al., 2022). This drive represents curiosity, which motivates individuals to take action in order to reduce uncertainty (Loewenstein, 1994). In the context of consumer behaviour, this curiosity often drives strong emotional motivation to explore, even leading to spontaneous purchasing behaviour without rational consideration (Gruber & Ranganath, 2019). Thus, curiosity acts as a psychological mechanism that bridges the effect of perceived uncertainty on impulse buying. As uncertainty increases, consumer curiosity intensifies, thereby increasing the likelihood of impulse buying behaviour to eliminate it.

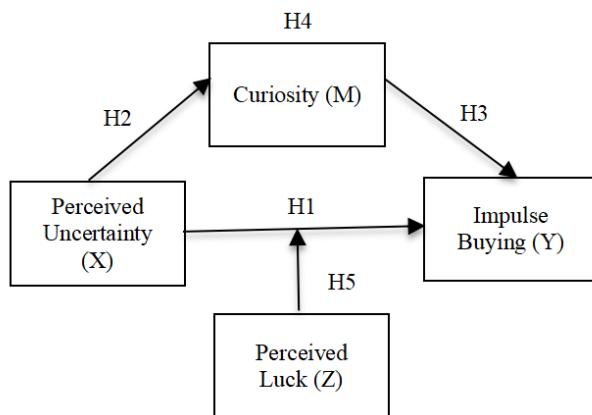
H4: Curiosity mediates the relationship between perceived uncertainty and impulse buying of blind box products.

Perceived luck refers to how individuals perceive and evaluate their own luck, which plays an important role in encouraging them to focus more on the positive aspects of events (Day & Maltby, 2003). Individuals with a strong belief in luck tend to exhibit positive, optimistic thinking about future outcomes, even in uncertain or high-risk situations. They are also more likely to make spontaneous decisions, including engaging in impulse buying behaviour (Yarritu et al. 2014). In this context, belief in luck can serve as an optimistic coping strategy, fostering a positive perception of good fortune and a sense of control over future outcomes. This may subsequently encourage individuals to increase their spending or make additional purchases after feeling "lucky", as they believe that luck will continue to favour them (Ward & Hill, 1991).

H5: Perceived luck strengthens the effect of perceived uncertainty on impulse buying of blind box products.

Figure 1 shows the conceptual framework and hypothesised relationships examined in this study. The model proposes that perceived uncertainty directly affects impulse buying (H1) and curiosity (H2). Curiosity is expected to influence impulse buying (H3) and mediate the relationship between perceived uncertainty and impulse buying (H4). Furthermore, perceived luck is hypothesised to moderate the

relationship between perceived uncertainty and impulse buying (H5), thereby influencing the strength of the direct effect of perceived uncertainty on impulse buying.



Source: Author (2025)

Figure 1. Research Model

Research Methodology

This study was conducted with Generation Z respondents who are members of online blind box enthusiast communities on social media platforms X (Twitter), Instagram, and WhatsApp. The study was conducted from November 2025 to January 2026, encompassing the stages of instrument distribution, data collection, and respondent eligibility verification. The sampling technique used in this study was non-probability purposive sampling, i.e., the selection of samples based on specific criteria relevant to the research objectives. This approach was applied to ensure that the selected sample accurately reflects consumer characteristics aligned with the study's focus. The total sample size in this study was 200 respondents.

Results

Respondent Characteristics

The respondents' characteristics in this study indicate that the majority were aged 18-22 years, totalling 181 individuals (87.4%), while respondents aged 23-28 years accounted for 26 individuals (12.6%). Based on gender, the sample was predominantly female, with 136 respondents (65.7%), whereas male respondents numbered 71 (34.3%). In terms of domicile, most respondents were from Java Island, totalling 193 individuals (93.3%), while the remainder came from Sumatra (2.4%), Kalimantan (2.4%), Bali (1.4%), and Sulawesi (0.5%). Regarding educational background, the majority were senior high school graduates or equivalent, totalling 130 individuals (62.8%), followed by bachelor's degree (S1) holders with 69 individuals (33.3%), diploma holders with 6 individuals (2.9%), and both junior high school and postgraduate (Master's degree or higher) levels each accounting for 0.5%.

Based on consumption behaviour, most respondents purchased blind box products 2-3 times within the past 12 months, totalling 112 individuals (54.1%), followed by 4-5 times with 38 individuals (18.4%), once with 34 individuals (16.4%), and more than five times with 23 individuals (11.1%). The most frequently used platform for obtaining information about blind boxes was TikTok (74.9%), followed by e-commerce platforms such as Tokopedia/Shopee (52.2%) and offline stores (51.2%). Meanwhile, the most common purchasing channel was offline stores (72.5%), followed by Tokopedia/Shopee (61.4%) and TikTok (25.6%). Regarding product price range, most respondents purchased blind boxes in the IDR 100.000-199.999 (38.2%) and IDR 200.000-299.999 (36.7%) ranges. Regarding income level, the majority of respondents earned less than IDR 2.000.000 per month (39.6%), and 24.2% reported having no fixed income and still depending on their parents. These characteristics indicate that

the respondents were predominantly young consumers with relatively low incomes who were interested in blind box products.

Table 1. Outer Model Evaluation Results

Variable	λ	CA	CR	AVE
PU (X)				
X.1.1	0.827			
X.1.2	0.723	0.572	0.597	0.542
X.1.3	0.647			
CU (M)				
M.1.1	0.842			
M.1.2	0.774	0.679	0.706	0.603
M.1.3	0.709			
PL (Z)				
Z.1.2	0.755			
Z.1.4	0.799	0.773	0.778	0.592
Z.1.5	0.803			
Z.1.8	0.719			
IB (Y)				
Y.1.1	0.834			
Y.1.2	0.798			
Y.1.3	0.854			
Y.1.4	0.830	0.923	0.929	0.649
Y.1.5	0.822			
Y.1.6	0.765			
Y.1.7	0.776			
Y.1.8	0.761			

Source: SmartPLS4 Output (Author, 2026)

Outer Model Evaluation Results

Based on Table 1, the outer model evaluation results, most constructs in this study have met the required validity and reliability criteria in the SEM-PLS analysis. The outer loadings for all indicators are above 0.60, indicating that each item meets the convergent validity criteria and represents the construct being measured (Hair et al., 2017). In addition, the Average Variance Extracted (AVE) values for all variables are above 0.50, indicating that each construct is able to explain more than half of the variance of its corresponding indicators. Furthermore, the reliability assessment shows that most variables have Cronbach's Alpha (CA) and Composite Reliability (CR) values above 0.60, indicating that they are reliable and consistently measure the same construct. However, for the perceived uncertainty variable, the CA and CR values are slightly below the required threshold, but remain close to the minimum acceptable level. This condition remains acceptable given the relatively limited number of items in the construct, and the indicators still meet the convergent validity criteria. Overall, the measurement model in this study is adequate and suitable for further analysis in the structural model (inner model) evaluation stage.

Inner Model Evaluation Results

Based on Table 2. The R-squared value for the curiosity variable is 0.149, indicating that the independent variables in this research model explain 14.9% of the variance in curiosity. According to the criteria of Hair et al. (2017), this R-squared value falls into the weak category, suggesting that curiosity is influenced by other factors not fully captured by the model. The R-squared value for the impulse buying variable is 0.214, indicating that perceived uncertainty, curiosity, and perceived luck explain 21.4% of the variance in impulse buying. This value is also categorised as weak; however, it remains acceptable for exploratory consumer behaviour research that involves psychological and emotional aspects.

Based on Table 3, the hypothesis is supported when the p-value is < 0.05 . Hypothesis 1 has a p-value of $0.003 < 0.05$, indicating a significant effect, hypothesis 1 is supported. Furthermore, hypothesis 2 has a p-value of $0.000 < 0.05$, indicating a significant effect; thus, hypothesis 2 is supported. Meanwhile, hypothesis 3 has a p-value of 0.160, which is > 0.05 , indicating an insignificant effect; therefore, hypothesis 3 is not supported. Hypothesis 4 has a p-value of $0.156 < 0.05$, indicating a significant effect, therefore hypothesis 4 is not supported. Furthermore, hypothesis 5 has a p-value of $0.360 > 0.05$, indicating an insignificant effect; thus, hypothesis 5 is not supported.

Table 2. R-squared Test Results

Variable	R-squared	R-squared adjusted
Curiosity	0.149	0.145
Impulse Buying	0.214	0.199

Source: SmartPLS4 Output (Author, 2026)

Table 3. Hypotheses Test Results

Hypothesis	Original sample (O)	T-Statistics	P-values	Description
H1	0.204	2.719	0.003	Hypothesis supported
H2	0.386	4.001	0.000	Hypothesis supported
H3	0.091	0.995	0.160	Hypothesis not supported
H4	0.035	1.010	0.156	Hypothesis not supported
H5	-0.022	0.359	0.360	Hypothesis not supported

Source: SmartPLS4 Output (Author, 2026)

Discussion

The test results indicate that perceived uncertainty has a positive and significant effect on impulse buying, suggesting that the higher consumers' perceived uncertainty about blind box contents, the greater their tendency to engage in spontaneous purchasing behaviour. H1 is supported. This finding can be explained by the respondents' characteristics, who are predominantly aged 18-22 years. At the late adolescent to early adulthood developmental stage, individuals tend to exhibit exploratory orientation, a desire for novel experiences, and relatively unstable financial self-control. This condition is further reinforced by the respondent's income level, which is mostly below IDR2.000.000 per month, suggesting that purchasing decisions are more influenced by emotional factors and experiential value than by long-term rational considerations. This is consistent with consumer behaviour models, which explain that product characteristics can act as stimuli that influence consumers' information processing prior to purchase decisions.

In addition, exposure to social media also plays a role in strengthening the perception of uncertainty as something attractive to consumers. The majority of respondents obtained information about blind boxes through digital platforms such as TikTok, marketplaces, and Instagram, which frequently feature unboxing content and product reviews. This exposure transforms perceived risk into an entertaining experience that stimulates curiosity. Within the Stimulus-Organism-Response (S-O-R) framework, perceived uncertainty serves as a stimulus that triggers consumers' emotional responses, thereby driving impulse buying behaviour. This is also reflected in respondents' purchasing frequency: most have purchased blind boxes more than once in the past year, with prices within relatively affordable ranges for young consumers.

Theoretically, these findings indicate that uncertainty in blind box products is not perceived as a negative risk, but rather as an element that enhances product attractiveness. Such uncertainty creates anticipation and enjoyment before consumers discover the actual product contents, thereby encouraging

spontaneous purchase decisions. This is consistent with Zhang et al. (2022), who found that surprise-based products increase impulse buying by generating anticipation and enjoyment prior to outcome revelation. Thus, in the context of young consumers who are active on social media and interested in collectable products, marketing strategies based on surprise and mystery elements can serve as key drivers of impulse buying behaviour. These findings also align with previous studies suggesting that surprise-based consumption mechanisms enhance impulse buying tendencies by providing engaging emotional experiences for consumers.

The test results show that perceived uncertainty has a positive and significant effect on curiosity, indicating that the greater the perceived uncertainty about blind box contents, the stronger the curiosity that arises. H2 is supported. This finding is consistent with the characteristics of the majority of respondents, who are in the 18-22 age range, a group that is psychologically in an exploratory stage and tends to be attracted to new experiences and emerging digital trends. Within the Stimulus-Organism-Response (S-O-R) framework, perceived uncertainty acts as a stimulus in the form of unclear product contents or the possibility of obtaining certain items, which then triggers a psychological response in the form of curiosity in the organism. When consumers are aware of the possibility of obtaining rare items but do not know the exact contents of the product, this creates an information gap that stimulates curiosity about the outcomes.

This finding is also consistent with the study by Zhang et al. (2022), which stated that uncertainty is a primary driver of curiosity in surprise-based consumption contexts. Individuals are naturally driven to close information gaps through direct experiential seeking. In the context of blind box products, curiosity does not only arise in the pre-purchase stage but is also reinforced by exposure to unboxing content on social media. Repeated exposure to such visual content widens the information gap while simultaneously strengthening consumers' curiosity about the possible contents of the product.

Empirically, respondents' purchasing behaviour, characterised by more than one purchase within a year, also indicates that the curiosity experienced is recurring. This is due to the blind box system, which maintains a random mechanism to ensure uncertainty is not fully eliminated after a purchase. In addition, the relatively affordable price range for young consumers leads to uncertainty being perceived as part of an entertaining experience rather than a significant financial risk. Thus, perceived uncertainty in blind box products functions not only as a source of ambiguity but also as a mechanism that effectively stimulates consumer curiosity and encourages engagement with the product.

The test results show that curiosity has no significant effect on impulse buying, leading to the rejection of hypothesis H3. This finding indicates that although consumers of blind box products exhibit a high level of curiosity, this psychological drive does not directly translate into impulse buying behaviour. In other words, curiosity about product contents is not necessarily followed by spontaneous purchasing decisions. In this context, curiosity plays a greater role in enhancing consumer interest and engagement with the product rather than directly triggering purchase behaviour.

Empirically, this result is consistent with Chen et al. (2025), who found that curiosity primarily enhances emotional engagement and information-seeking behaviour, but does not directly lead to purchasing decisions. Chen et al. (2025) further explain that curiosity is generally intrinsic, arising from a need for enjoyment, interest, and psychological exploration. Theoretically, this condition can also be explained by the information-gap theory, which posits that curiosity arises when there is a discrepancy between what is known and what is unknown. However, closing this information gap does not necessarily require making a purchase. In the digital era, consumers can satisfy their curiosity through various alternative sources, such as unboxing content, product reviews on marketplaces, and experiences shared by other users on social media.

Given the characteristics of the respondents, who are predominantly aged 18-22 years and have relatively limited income levels, it is evident that although they exhibit strong curiosity about blind box trends, their purchasing decisions are still influenced by financial considerations. In addition, respondents' purchasing frequency, which is generally categorised as several times per year, indicates

the presence of self-control in consumption. Thus, in the context of this study, curiosity is more frequently manifested through information exploration and digital engagement than through direct impulse buying behaviour.

The test results show that perceived luck does not significantly strengthen the relationship between perceived uncertainty and impulse buying; therefore, hypothesis H5 is rejected. This indicates that consumers' belief in personal luck does not strengthen the relationship between blind box content uncertainty and impulse buying behaviour. Within the Stimulus-Organism-Response (S-O-R) framework, perceived uncertainty serves as a stimulus that can directly trigger a response, such as impulse buying. However, in this study, the presence of perceived luck does not strengthen this response, suggesting that impulse buying is primarily driven by product uncertainty, independent of consumers' perceptions of luck.

This finding can be explained by the characteristics of the respondents, who are predominantly Generation Z individuals aged 18-22 years with high exposure to digital technology. This group is familiar with probabilistic systems, transparency in marketplace information, and product reviews on social media. Such conditions lead consumers to understand that the outcomes of blind box purchases are random and not determined by personal luck. In addition, most respondents have relatively low incomes, which means their purchasing decisions are still influenced by price considerations and the perceived likelihood of obtaining desired items. Thus, although luck is often associated with blind box products, consumers in this study are more driven by surprise elements and emotional experiences rather than beliefs in personal luck.

Empirically, respondents' purchasing frequency, which is generally categorised as several times per year, also indicates self-control in consumption behaviour. These findings suggest that the role of perceived luck as a moderating variable is context-dependent and does not always emerge across all consumer groups. This study extends Zhang et al. (2022) by demonstrating that the moderating effect of perceived luck is not universally applicable and may vary across consumer segments. In the context of Indonesian Generation Z, product uncertainty in blind boxes is already sufficient to trigger impulse buying, without the need for reinforcement through luck-related perceptions. Therefore, more effective marketing strategies should not solely emphasise luck-based narratives but also strengthen emotional experiences, surprise elements, and unboxing visuals that enhance product attractiveness among young consumers.

Conclusion, Research Limitations, and Suggestions for Future Research

This study concludes that perceived uncertainty has a positive and significant effect on both impulse buying and curiosity. However, curiosity does not have a significant effect on impulse buying; it does not mediate the relationship between perceived uncertainty and impulse buying. In addition, perceived luck does not significantly strengthen the effect of perceived uncertainty on impulse buying. Overall, the findings indicate that perceived uncertainty plays a key role in driving impulse buying behaviour among blind box consumers, while other psychological factors, such as curiosity and perceived luck, do not show significant roles in either mediation or moderation mechanisms. Thus, the effect of uncertainty on impulse buying in this study is predominantly direct.

The limitations of this study stem from the measurement of the perceived uncertainty variable, which is based on a single source article and yields only three indicators. This limitation restricts the researcher's flexibility in eliminating indicators with relatively lower validity values, as removing one item would cause the construct to no longer meet the minimum number of indicators required in SEM-PLS. In addition, the sample characteristics, limited to Generation Z blind box consumers in Indonesia, limit the generalisability of the findings to other age groups and cultural contexts. Differences in cultural background and social values may lead to different patterns of relationships among variables

Future studies are recommended to use and adapt a greater number of references in developing the measurement items for the perceived uncertainty variable, so that the number of items is not solely dependent on a single article. By utilising multiple relevant studies, the perceived uncertainty construct can be represented more comprehensively and provide greater flexibility in the measurement model evaluation process, particularly in validity and reliability testing. In addition, future research is encouraged to expand the sample characteristics by including different age groups or cultural contexts, so that the findings can be compared across generations and cultures, thereby improving the generalisability of the results.

Statement of Conflict of Interest

The author declares that there are no conflicts of interest in this study. The entire research process and the writing of this article were conducted independently, without any personal, commercial, or institutional interests that could influence the results or interpretation of this study.

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